R3G310-AJ38-61

EC centrifugal fan

backward curved, single inlet

R3G310-AJ38-61 ebmpapst Datasheet
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ErP2015 EXCEEDS THE NORM

Nominal data

Type	**R3G310-AJ38-61**
Motor	**M3G084-DF**

Phase		1~
Nominal voltage	VAC	230
Nominal voltage range	VAC	200 .. 277
Frequency	Hz	50/60
Type of data definition		fa
Speed	min^{-1}	2300
Power input	W	275
Current draw	A	1.2
Min. ambient temperature	°C	-25
Max. ambient temperature	°C	40

ml = Max. load · me = Max. efficiency · fa = Running at free air · cs = Customer specs · cu = Customer unit
Subject to alterations

Data according to ErP directive

Installation category	A
Efficiency category	Static
Variable speed drive	Yes
Specific ratio*	1.00

* Specific ratio = 1 + p_{fs} / 100 000 Pa

		Actual	Request 2013	Request 2015
Overall efficiency η_{es}	%	60.8	42.8	46.8
Efficiency grade N		76	58	62
Power input P_{ed}	kW	0.36		
Air flow q_v	m^3/h	1770		
Pressure increase p_{fs}	Pa	400		
Speed n	min^{-1}	2210		

Data definition with optimum efficiency. LU-64612
The ErP data is determined using a motor-impeller combination in a standardised measurement configuration.

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Technical features

Mass	4.31 kg
Size	310 mm
Surface of rotor	Coated in black
Material of electronics housing	Die-cast aluminium
Material of impeller	Aluminium sheet
Number of blades	6
Direction of rotation	Clockwise, seen on rotor
Type of protection	IP 20
Insulation class	"B"
Humidity class	F0
Max. permissible ambient motor temp. (transp./ storage)	+80 °C
Min. permissible ambient motor temp. (transp./storage)	-40 °C
Mounting position	Shaft horizontal or rotor on top; rotor on bottom on request
Condensate discharge holes	None
Operation mode	S1
Motor bearing	Ball bearing
Technical features	- Operation and alarm display: reversible voltage output 0 V / +15 V - Integrated PID controller - Motor current limit - PFC, active - RS485 ebmBUS - Soft start - Control interface with SELV potential safely disconnected from the mains - Over-temperature protected electronics / motor - Line undervoltage / phase failure detection
EMC interference immunity	Acc. to EN 61000-6-2 (industrial environment)
EMC harmonics	Acc. to EN 61000-3-2/3
EMC interference emission	Acc. to EN 61000-6-4 (industrial environment)
Touch current acc. IEC 60990 (measuring network Fig. 4, TN system)	<= 3.5 mA
Electrical leads	With plug
Motor protection	Thermal overload protector (TOP) wired internally
Protection class	I (if protective earth is connected by customer)
Product conforming to standard	EN 61800-5-1; CE
Approval	CCC; CSA C22.2 Nr.113; EAC; UL 507

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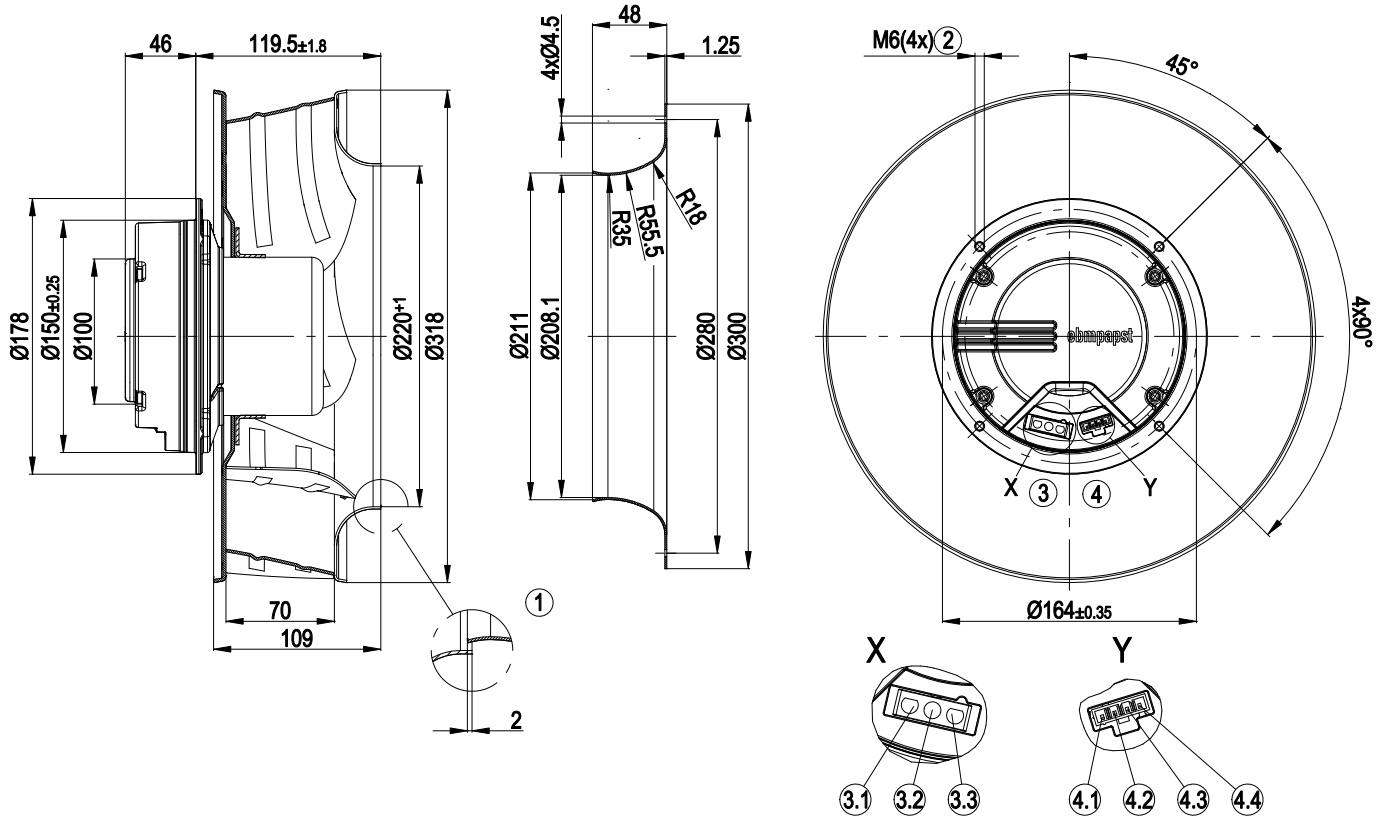
Product drawing



1	Accessory part: Inlet nozzle 31050-2-4013 not included in scope of delivery
2	Thread reach max. 10 mm
3	Strip Lonco No. C63502-3A, mating connectors with female terminals are not included in the standard scope of delivery
3.1	PE
3.2	L
3.3	N
4	Strip 4-pole Molex 39-30-2040, mating connectors with female connectors not included in scope of delivery
4.1	RSB
4.2	RSA
4.3	+15 V; in the event of fault: 0 V
4.4	0 V; in the event of fault: +15 V

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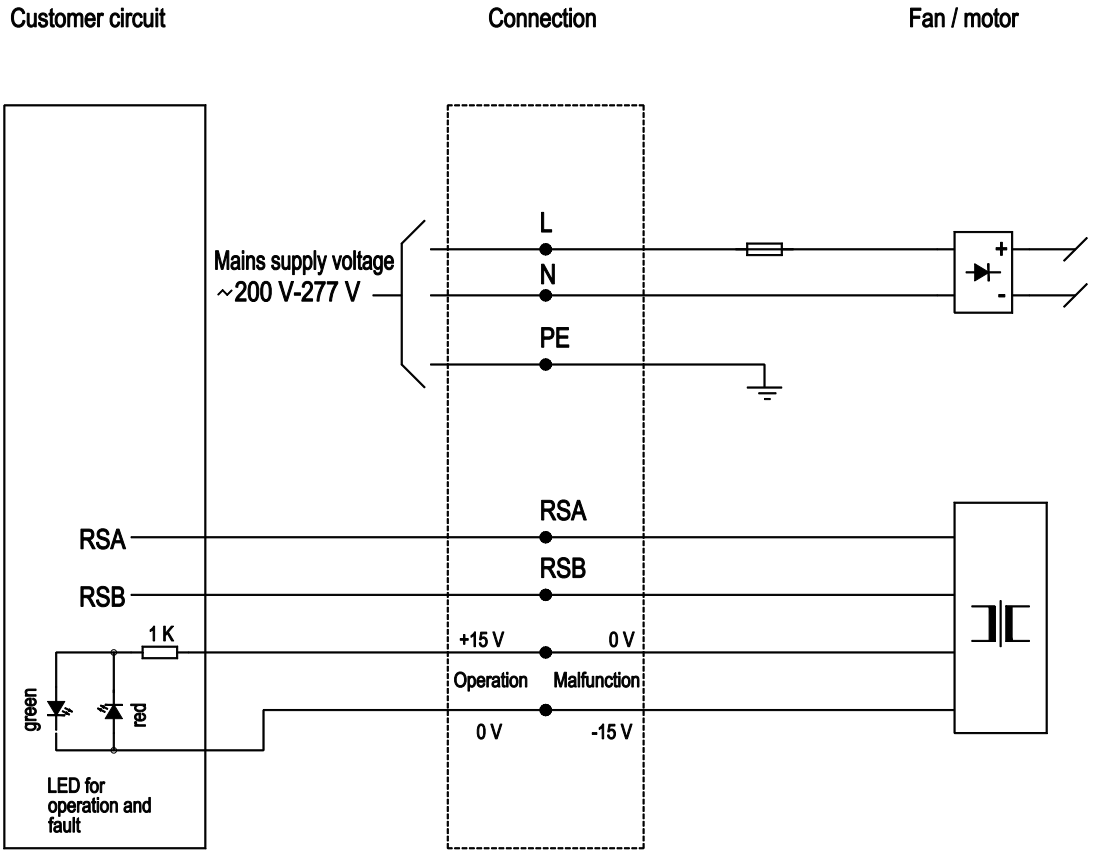
Connection screen



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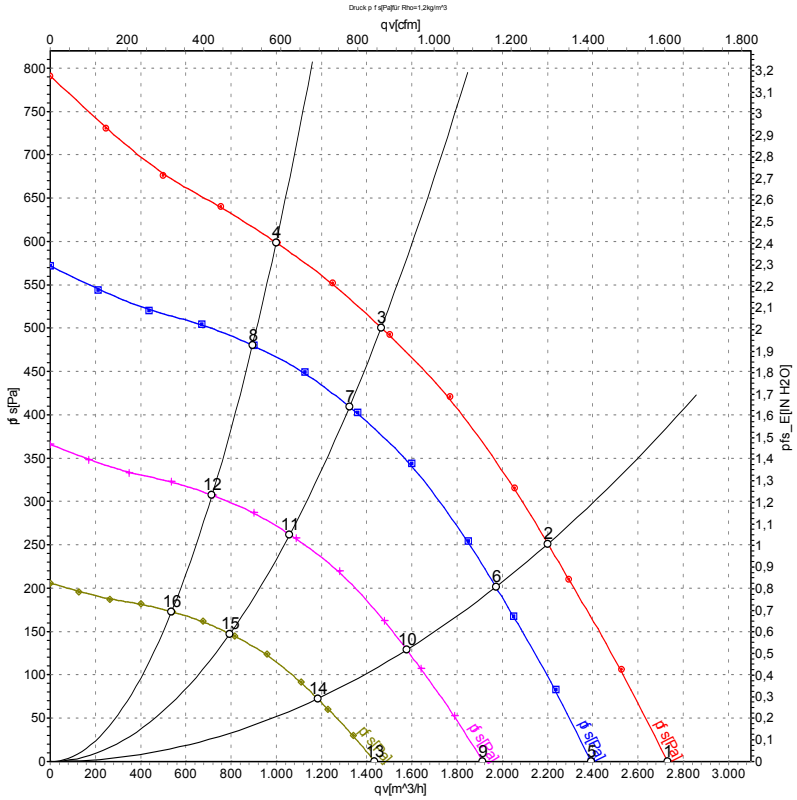
Charts: Air flow 50 Hz



Measurement: LU-64612

Air performance measured as per ISO 5801 Installation category A. For detailed information on the measuring set-up, please contact ebm-papst. Suction-side noise levels: LwA measured as per ISO 13347 / LpA measured with 1m distance to fan axis. The values given are valid under the measuring conditions mentioned above and may vary according to the actual installation situation. With any deviation from the standard set-up, the specific values have to be checked and reviewed with the unit installed.

Measured values

	U	f	n	P_{ed}	I	qv	p_{fs}
	V	Hz	min^{-1}	W	A	m^3/h	Pa
1	230	50	2300	275	1.20	2730	0
2	230	50	2235	338	1.50	2200	250
3	230	50	2200	365	1.60	1465	500
4	230	50	2230	342	1.52	1000	600
5	230	50	2000	185	0.83	2390	0
6	230	50	2000	243	1.08	1970	201
7	230	50	2000	269	1.19	1325	410
8	230	50	2000	246	1.09	895	481
9	230	50	1600	95	0.42	1915	0
10	230	50	1600	124	0.55	1575	129
11	230	50	1600	138	0.61	1060	262
12	230	50	1600	126	0.56	715	308
13	230	50	1200	40	0.18	1435	0
14	230	50	1200	52	0.23	1185	72
15	230	50	1200	58	0.26	795	148
16	230	50	1200	53	0.24	535	173

U = Supply voltage · f = Frequency · n = Speed · P_{ed} = Power input · I = Current draw · qv = Air flow · p_{fs} = Pressure increase